

## **OIL AND GAS PLANT:**

- 1993 - 132/22/11KV Titan, Pasir Gudang Study and Revise Protection Co-Ordination
- 1994 - 132/22/6.6KV Titan, PetroChemical S/S TN. Factory, Johore
- 1998 - 132/22/11KV Titan Polyethylene plant, Pasir Gudang
- 1999 – 11KV/415V ABF Fertilizer plant, Bintulu Recertification Test of Protection
- 1999 – 11/3.3KV Petronas Penapisan Kerteh Recondition of Power Transformers
- 1999 – 132/33KV Ethylene Trengganu EPC for Digital Distribution Transient Recorder
- 1999 – 132/22/11KV/3.3KV Central utilities Facilities (CUF) Trengganu
- 1999 – 132/6.6KV GPP5 and GPP6 Electrical Installations for GPP5 and GPP6, Kerteh/Paka
- 2000 – 33/11/3.3/0.415KV Ammonia Syngas, Kertih
- 2000 – 11KV Titan HDPE TG. Langsat for ABB- Thailand
- 2000 – 132/11/3.3KV/415V Petronas Fertilizer (KEDAH) Sdn. Bhd
- 2000 – 33/6KV Petronas Methanoil (LABUAN) Sdn. Bhd
- 2001 – 132KV Optimal Petro Chemicals
- 2001 – 33/11/0.415KV Aromatics, KR-2 Petronas Penapisan (T) Sdn. Bhd
- 2001 – 33/11/0.415KV Ammonia/Syngas Plant, Kertih
- 2001 – 33/11/0.415KV Vinyl Monomer (M) Sdn. Bhd
- 2001 – 132KV Optimal Petro Chemicals
- 2002 – 132/11/3.3/0.415KV Petronas Fertilizer (Kedah) Sdn. Bhd
- 2002 - 132/11/3.3/0.415KV Petronas Ammonia
- 2002 – 132/11KV CUF Kerteh CUF Kertih
- 2003 - 33/11/0.415KV Ammonia/Syngas Plant, Kertihturna Round package
- 2003 – 33/11/3.3KV CUF, Gebeng Transformers Repair works. Petronas Gas Berhad
- 2003 – 132/33/6.6KV Ethylene/polyethylene Malaysia Plant, KertihTurna round
- 2003 - 132/11/3.3/0.415KV Optimal Chemicals (M) Sdn. Bhd
- 2004 – 132/11/3.3KV/415V Petronas Fertilizer (KEDAH) Sdn. Bhd
- 2004 – 132/11/6.6KV B.P.Chemicals, Gebeng Power Factor Test of 12MW & 8MW Motors
- 2005 – 33/11/0.415KV KR-1 and KR-2 Integrated TurnaRound and Project (TANP) 2005.
- 2005 – 132/11KV MTBE Transformer Oil Purification for MTBE/PP TA 2005.MTBESdn.Bhd
- 2005 – 132/11KV/415V CUF Kerteh Protective Relay Calibration

2005 – 132/33KV CUF Kerteh Diagnostic Analysis of 132KV GIS for Partial discharge

2005 – 132/33KV CUF Gebeng Diagnostic Analysis of 132KV GIS for Partial discharge

2006 – 33/11/3.3KV Petronas Ammonia Plant transformer Oil Filtration and Servicing

2006 – 33KV CUF Gebeng Diagnostic Survey and Analysis of 33KV GIS for Partial discharge

2006 – 132/11KV MTBE Sdn.Bhd Transformer Oil Purification

2006 - 132/33/11/6.6KV & 415V Ethylene, Kerteh Testing of Doble Test for High Voltage

2006 - 132/11/3.3/0.415KV Optimal, Kerteh Testing of Transformer&132KVGIS Switchgear

2007 - 132/11/3.3/0.415KV Optimal, Kerteh Maintenance of Protective relay.

2007 – 33/11/0.41KV KR-2 Protective relay Calibration

2007 – GPP-B, Paka Doble Power Factor Test for Motor at GPP-B, Paka.

2007 – 132/11/3.3/0.415KV Optimal, Kerteh Transformer Oil Quality Test

2007 – CUF Gebeng Transformer Oil Quality Test. Petronas Gas

2007 – Ethylene /Polyethylene, Kerteh Transformer Oil Quality Test

2007 – Petronas Gas Berhad, Segamat Testing and Certification Test

2007 – GT-B, CUF Kerteh Tangent Delta, Partial Discharge Test

2007 – CUF, Kerteh To carryout Testing On 30MVA 132/11KV Transformer at CUF

2007 – GT-C, CUF Kerteh Tangent Delta, Partial Discharge Test

2007 - GT-D, CUF Kerteh Tangent Delta GT-D Alstom Generator at GT-D

2007 – SHELL SMDS, Bintulu Electrical Maintenance Services

2007 – 33/11/0.415V CUF Kerteh Doble Power Factor Test

2007 – 132/11/3.3KV/415V Petronas Fertilizer (KEDAH) Sdn.Bhd

2007 – 33/11/3.3KV Petronas Ammonia Plant Relay Calibration, Testing

2008- 132/11KV/415V CUF Kerteh Tangent Delta Teat of Generator

2008 – 132KV CUF Kerteh Diagnostic Analysis of 132KV GIS for Partial Discharge

## **OIL PLATFORMS:**

1994 – EPMI Guntong D, Terengganu Testing and Calibration of Protection Relay

1997 – EPMI Seligi F and Seligi D Platformat Kerteh Hi-Pot Test and HV Cable Test

**STEEL MILLS:**

1991 – 11KV ASM, Kelang repair Maintenance of SWGR, Relays and Transformers

1992 – 132/30KV Antara Oil Treatment and Vacuuming 2X80MVA Transformers

1992 – 33/6.6KV Antara Oil Treatment 60MVA Furnace & 60MVA Laddle Furnace Transformer

1992 – 33KV ASM, Kelang Oil Purification of 55MVA Furnace Transformer

1993 – 132/33/11KV ASM Maintenance of 132/15KV TRF Oil Purification

1994 – 132KV ASM Kelang Maintenance of 132KV TRF Oil Purification.

1994 – 132KV/22KV/6.6KV Antara T&C of Main Substation Extension

1995 – 275KV/33/3.3KV, Perwaja T&C of 275KV/33/3.3KV Extension

1995 – 132KV/11KV ASM Maintenance of Protection Relays.

1995 – 33/0.800KV Antara Oil Purification of 80MVA and 50MVA Furnace Transformers.

1995 – 132/11/0.415KV Amsteel Oil Purification of TRF, Servicing of Switchgears

1996 – 132KV/30KV Antara Maintenance and Condition Monitoring of Relay Tests

1996 – 33KV Perwaja Certification Tests and Pressure Tests of Relays

1996 – 33KV and 11KV Amsteel 25/31.5MVA Maintenance

1997 – 132KV Amsteel Maintenance of 132KV S/S

1997 – 11KV Amsteel Maintenance of 11KV Switchgear Relays and Transformers

1998 – 275KV Perwaja Service Calibrate and Functional

1999 – 33KV/6.6KV/415V Perwaja Protection Relay and Functions Test

2000 – 275/33/6.6KV/415V Perwaja Calibrate Protection Relays

2001 – 132/33/11/0.415KV AM Maintenance Service and Recertification Tests

2002 – 132/33/6.6kV/0.415KV AM Protection Relay Calibration

2002 – 275/33/6.6KV/415V Perwaja Service & Calibrate Protective Relays

2003 – 33KV/6.6Kv/415V Perwaja Functioning Test of Protective Relay

2004 – 132/30/11/0.415KV Antara Doble Test of Transformer Terminal Bushing

2005 – 132KV/33/11/0.415KV Amsteel 132KV Protection Relay Calibration.

2005 – 132KV /30KV Antara Calibration Protection Relay

2006 – 132/33/11/0.415KV AM Reactor and Tan Delta Test for 80MVA 33KV Reactor

2006 – 275/33/11/0.415KV Mega Relay Calibration

2006 - 132/33/11/0.415KV AM Steel Doble Test for 132KV CB CT's Surge Arrestor

2006 - 132/33/11/0.415KV AM Steel Tan Delta Test on 33KV Capacitor

**FACTORY:**

1991 – 33/6.7KV MET Tube Certification and Commissioning Tests of 33/6.6KV

1991 – 132KV APMC, Certification & Commissioning Tests of 132KV GIS Substation

1992 – 11KV Mathsushitashah Alam Maintenance of Protection Relay

1992 – 11KV FPT. Maintenance of Protection Relays and Transformers

1992 – 33/6.6KV APMC. Rawang relay Maintenance Tests of Protection Relays

1993 – 11KV/0.415KV H & R Johnson Senawang, Maintenance Test of Protection Relays

1993 – 11/0.415KV Proton Relay Maintenance Tests of all Protection Relays

1994 – HUME Fibreboard Calibration and Testing of Protection Relays

1994 – 33KV/11KV S/S Canon Opto, Maintenance Test of Relays, Bintulu Kindenko(M)S/B

1994 – HUME Fibreboard Supply, Install and Commission Harmonics Filters

1995 – 11KV/0.433KV H&R Johnson Maintenance of HV Switchgear Generator Sets

1995 – 132KV/11KV APMC. Rawang Oil Purification and Service of OLTC of 132KV/TFR

1996 - 132KV/11KV APMC. Rawang Oil Purification and Service of OLTC of 132KV/TFR

1996 – LV/SW/BD Federal Power Maintenance of Relays

1997 – 132KV/11KV AMPC Maintenance Work at 132KV Main Intake S/S and 11KV S/S

1999 – Hitachi Chemical, Test of Protection Relays and Servicing of Circuit Breakers.

2001 – 11KV Sabah Forest Industry Condition Diganostic Test of 30MVA 11KV Alternators

2002 – 11/0.433KV Nestle Sdn.Bhd .Relay Calibration .Nestle. Sdn. Bhd

2002 – 33/11KV Texas Instrument ULU Power Factor on 33/11KV 15MVA Transformer

2002 – 132/11/0.415KV Eastman, Gebeng, Doble Test for 132/11KV Transformer

2003 – 11/0.433KV Nestle Sdn.Bhd .Relay Calibration .Nestle. Sdn. Bhd

2004 - 11/0.433KV Nestle Sdn.Bhd .Relay Calibration of Protection Relays at NFM S/S 2

2006 - 11/0.433KV Nestle Sdn.Bhd .Relay Calibration and Switchgear Servicing

2006 – 33/11KV Celestica Power Factor Test for 7500KVA 33/11KV Transformer

2006 – 132/11/0.415KV Eastman, Gebeng Doble Test for 132/11KV Transformer

2007 – Pascorp Paper, 3.3KV Switchgear High Pot test and Inspection

2007 – 11/0.433KV Nestle Sdn.Bhd. Relay calibration and Switchgear Servicing

2007 – Kimberly Clark products, Tangent Delta Test of Transformer

2008 – 11/0.433KV Nestle Sdn.Bhd. Relay calibration and Switchgear Servicing

2008 - 11/0.433KV Nestle Sdn.Bhd. Transformer Oil Purification

1991 – 33/11KV TNB YOW Chuan Substation Commissioning Tests of 33KV and 11KV S/S

1991 – 132KV TNB New Segamat S/S Acceptance & Certification Tests of 90MVA TFR

1991 – 132/11KV TNB Paka Station Oil Treatment and Vaccuming of 132/11KV 120MVATFR

1991 – 275/11KV TNB Pasir Gudang Oil Treatment and Vaccuming of 120MVA Transformer

1992 – 33KV SESCO S/S, Miri, T&C of 33KV S/S with 3TFR, One Bus

1992 – 132KV TNB Balakong S/S T&C of 132KV SS

1992 – 132KV TNB Cheras SS Oil Treatment and Vaccuming of 2X90MVA 132KV TFR

1992 – 132KV K. L. North SS Oil Treatment and Vaccuming of 1X45MVA 132KV TFR

1993 – 11KV TNB Terengganu T&C Equipment at 11KV Generator

1993 – 132KV C. B. P Station, Oil Treatment and Vaccuming of 2X42.5MVA, 132KV GT

1993 – 132KV TNB Dang Wangi Substation High Voltage Test of 132KV Oil Filled Cable

1993 – 132KV SEA Park Substation High Voltage Test of 132KV Cable TNB

1993 – 11KV Kapar Power STN, T&C of Two Unit of 30MW Gas Turbine Relay

1993 – 132KV Kapar Power STN, T&C of Two Unit of 40MW 132/11KV Gas Turbine Relay

1993 – 132KV Pasir Gudang Power Oil Treatment and Vaccuming of 2X42.5MVA 132 TFR

1993 – 132/11KV Pasir Gudang Power T&C 2X 30MW GT Relay Protection

1993 – 132KV Tuaran Power Station, Sabah Tests of 132KV

1993 – 6.6KV Dulang SSE. Pasir Gudang HV Test of 6.6KV Switchgear

1994 – 132KV Labuan Relay Maintenance and recalibration Protection Relay in 132KV S/S

1994 – 132KV Labuan Beaufort SS Testing of relays, HV Tests of 132KV Cables

1994 – 33/11KV 0.415KV Sungai Semenyih Relay Maintenance Tests of Protection Relays

1994 – 33/6.6KV Dengkil, Selangor maintenance and testing of Protection relays

1994 – 275KV Serdang TNB. Power Station Oil Treatment and Vaccuming of Transformer

1994 – 132KV/275KV TNB Bedong S/S Kedah T&C of 132KV and 275KV TNB Transmission

1994 – TNB Kapar P/S Selangor Oil Treatment and Vaccuming of Transformer 3X131MVA

1994 – 275KV Kuala Langat SS T&C of 275KV SS for IPP Power Station at Genting Sanyen.

1994 – 33KV Bintawa S/S Commissioning Tests of 33KV Substation Equipment

1994 - 33KV Bintawa S/S Kuching Commissioning Tests of 33KV Substation Equipment  
1994 – 33/11KV Selayang P.Station Selangor HV Test of 33KV Cables T.N.B  
1994 – 25KV Kuang TSL T&C Transmission S/S. For Rail Electrification Project  
1994 – 275 KV Genting Sanyen IPP Kuala Langat Certification Test of 275KV S/S  
1994 – 132KV /11KV TNB Senai S/S TN. T&C of Substation Equipment T.N.B  
1994 - 132KV /22KV TNB Tebrau S/S TN. Johore Tests and Commissioning of Substation  
1994 - 132KV TNB. Pontian S/S TN. Tests and Commissioning of Extension  
1994 – 132KV/11KV TNB. Pekan Nenas S/S TN. Tests and Commissioning of TNB S/S  
1995 – 132/11KV Labuan Beaufort, Sabah Relay Maintenance of all Protection  
1995 – 25KV Simpang Batu TSL. Padang Jawa TSL. South P. Klang TSL. Serdang TSL.  
1996 – 132/11KV Labuan Beaufort, Sabah Oil Purification of 2 No of Transformers

#### **UTILITIES- LOCAL:**

1996 – 66KV Sepang Bay Site Testing of 66KV GIS Bay Mahsul Engineering Sdn.Bhd  
1996 – 132KV Pulau Langkawi Technical Supervision of 2X30MVA Generator, 132KV  
1997 – 132KV/33/11KV LBI Sdn Bhd. Labuan/Beaufort Recertification Test of relays  
1997 – Electrical EMU DGA Tests of Transformer Oil. Keretapi Tanah Melayu Berhad  
1997 – 275/11KV YTL Pasir Gudang and paka Recertification Tests of Protection Relays  
1997 – 11/6.6KV Klang Valley Distribution Terminal Site Certification Tests of Relays  
1997 – 275/132KV Skudai S/S BHEL Transformer Capacity: 240MVA  
1997 - 275/132KV TG. Kling TNB S/S BHEL Transformer Capacity: 240MVA  
1997 - 275/132KV Serdang S/S BHEL Transformer Capacity: 240MVA  
1998 – 132KV LBI Sdn.Bhd Labuan /Beaufort recertification Test of Relays  
1998 – 275/11KV YTL Pasir Gudang and paka Recertification Test of Protection Relays  
1998 – 15KV Port Dickson Power (IPP) Recertification Test of Protection Relays  
1998 – 132KV KG. Kerinchi 132KV S/S Testing and Commissioning of 132KV GIS S/S  
1998 – SG. Selangor Water Supply Site Test of Electrical Power Generator  
1998 – Port Dickson Power Station Electrical Protection Relays  
1998 – 132KV SSAAPS, Kapar Site Certification Tests of Electrical Power  
1998 - 275/132/11KV Yong Peng North S/S BHEL Transformer Capacity: 240MVA  
1998 - 275/132/11KV K.L. East S/S BHEL Transformer Capacity: 240MVA

1999 – 275/11KV YTL, Pasir Gudang and paka Recertification Test of Protection Relays

1999 - 275/132/11KV Bukit Batu S/S BHEL Transformer Capacity: 240MVA

1999 – 132/22/11KV S/S Gopeng Road S/S Testing and Commissioning at Gopeng Road

2000 - 275/11KV YTL, Pasir Gudang and paka Recertification Test of Protection Relays

2001 - 275/11KV YTL, Paka Condition Diagnostic Test of 275KV Transformer Bushing

2001 - 275/11KV YTL, Paka Test of Generator, Transformer and Busbar Protections

2002 – 11KV Bersia Power Station Doble Test of HV Generator at Bersia Power Station

2002 – 11KV Perai Power Station Doble Dielectric Test Generator at Perai

2002 – 275KV Lumut Power Plant Tan Delta and Capacitance Test

2003 – 11KV YTL Paka Power Station to Perform Tan Delta on Paka GT 22 Generator

2003 – 275/11KV YTL, Pasir Gudang and Paka Tests of Protection Relays for 275KV

2006 – 275KV Kapar Power Station FRA at Kapar Power Station

2006 – 275KV KEV Kapar FRA at KEV Kapar

2006 - 275/11KV YTL, Pasir Gudang Test of Protection Relays for 275KV

2006 – 132KV WOH Power Station, Cameron HighLand Tangent Delta Test

2006 – 275/132KV Pergau Hydro Station .Tan Delta Test of 166.67MVA 16KV Generator

2006 – 275KV Lumut Power Plant Tangent Delta Test fir Bushings

2006 - 11KV YTL Pasir Gudang to Perform Tan Delta for Transformer

2006 - 275/11KV YTL, Paka Recertification Tests of Protections Relays for 275KV

2006 – 275/132KV Pergau Power Station .Tangent Delta Test of 166.67MVA 16KVGenerator

2007 – 275/132KV Paka Power Station FRA Test Generator Transformer

2007 – 132KV Gelugor Power Station, Pulau Pinang FRA Test Generator Transformer

2007 – 20/275KV Kapar Power station FRA Test Westingpac Sdn

2007 – 20/275KV Kev Kapar Tan Delta for Kapar Kev Generator Transformer

2007 – GT3A Pasir Gudang Power Station Doble P.F /Tan Delta Test of Alternator

2007 – 275/132KV Pergau Power Station Tangent Delta Test of 16KV Generator

2007 – 132KV SG. Piah Hydro Station, SG. Siput Tangent Test on Stator Winding

2007 – 275KV Kapar Power Station Tangent Delta Test for 3.3KV Motor

2008 – 20/275KV Kapar Power Station Electrical Test on Generator Transformer

## **UTILITIES- INTERNATIONAL:**

2002 – 235/21KV Bowin Power Plant, Thailand SFRA Transformer Alstom Power

2003 – 235/21KV Bowin Power Plant, Thailand SFRA Transformer Alstom Power

2007 – SFRA Test at Singapore Aspectus Engineering Pte

2008 – PT Lontar Papyrus, Jambi, Indonesia Tan Delta Test of Alternator